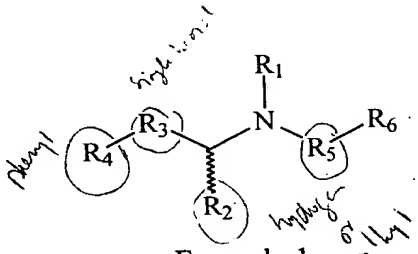
We claim:

1. A method of treating a viral infection, comprising administering to a subject in need thereof a therapeutically effective amount of a deprenyl compound, such that treatment of the viral infection occurs.

2. The method of claim 1, wherein the viral infection is caused by an RNA virus.

3. The method of claim 2, wherein said RNA virus is selected from the group consisting of HIV, Herpes Simplex-1 virus, hepatitis A virus, Epstein-Barr virus, SV-40 virus, cytomeglavirus and adenovirus-5.

4. The method of claim 1, wherein the deprenyl compound is represented by the formula :



Formula 1

in which

R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;

R_2 is hydrogen or alkyl;

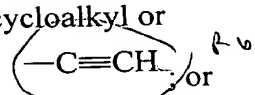
R_3 is a single bond, alkylene, or $-(CH_2)_n-X-(CH_2)_m$;

in which X is O, S, or N-methyl; m is 1 or 2; and n is 0,1, or 2;

R_4 is alkyl, alkenyl, alkynyl, heterocyclyl, aryl or aralkyl; and

R_5 is alkylene, alkenylene, alkynylene and alkoxylene; and

R_6 is C_3-C_6 cycloalkyl or



or

R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached, a cyclic or polycyclic group;

and pharmaceutically acceptable salts thereof.

5. The method of claim 1, wherein the deprenyl compound is (-)-desmethyldeprenyl.

6. The method of claim 1, wherein the deprenyl compound is administered to the subject by transdermal administration.

7. The method of claim 1, wherein the deprenyl compound is administered in a pharmaceutically acceptable carrier.

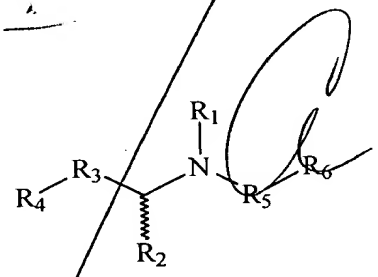
8. The method of claim 1, wherein the subject is a human.

9. A method of inhibiting replication of a virus in a virus-infected cell, comprising contacting the virus-infected cell with an effective amount of a deprenyl compound, such that the affinity of GAPDH for viral RNA is decreased and viral replication in the virus-infected cell is inhibited.

10. The method of claim 9, wherein the virus is selected from the group consisting of HIV, Herpes Simplex-1 virus, hepatitis A virus, Epstein-Barr virus, SV-40 virus, cytomeglavirus and adenovirus-5.

11. The method of claim 9, wherein the virus-infected cell is a cell in cell culture.

12. The method of claim 9, wherein the deprenyl compound is represented by the formula :



Formula 1

in which

R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;

R_2 is hydrogen or alkyl;

R_3 is a single bond, alkylene, or $-(CH_2)_n-X-(CH_2)_m$;

in which X is O, S, or N-methyl; m is 1 or 2; and n is 0,1, or 2;

R_4 is alkyl, alkenyl, alkynyl, heterocyclyl, aryl or aralkyl; and

R_5 is alkylene, alkenylene, alkynylene and alkoxylene; and

R_6 is C_3-C_6 cycloalkyl or

—C≡CH ; or

→ R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached, a cyclic or polycyclic group;

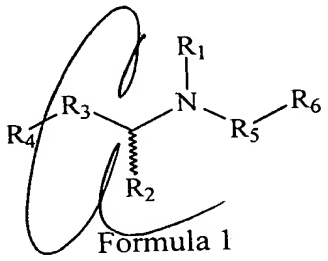
and pharmaceutically acceptable salts thereof.

13. The method of claim 12, wherein the deprenyl compound is (-)-desmethyldeprenyl.

14. A method for decreasing the affinity of GAPDH for viral RNA, the method comprising contacting GAPDH with a deprenyl compound, such that the affinity of GAPDH for viral RNA is decreased.

15. The method of claim 14, wherein the deprenyl compound associates with GAPDH such that the conformation of GAPDH is altered.

16. The method of claim 14, wherein the deprenyl compound is represented by the formula :



Formula 1

in which

R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;

R_2 is hydrogen or alkyl;

R_3 is a single bond, alkylene, or -$(CH_2)_n$-X-$(CH_2)_m$;

in which X is O, S, or N-methyl; m is 1 or 2; and n is 0,1, or 2;

R_4 is alkyl, alkenyl, alkynyl, heterocyclyl, aryl or aralkyl; and

R_5 is alkylene, alkenylene, alkynylene and alkoxylene; and

R_6 is C_3-C_6 cycloalkyl or

—C≡CH ; or

R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached, a cyclic or polycyclic group;

and pharmaceutically acceptable salts thereof.

17. The method of claim 16, wherein the deprenyl compound is (-)-desmethyldeprenyl.

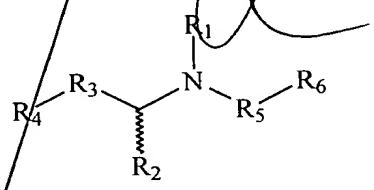
18. A method for inhibiting replication of a virus in a virus-infected cell, comprising inhibiting colocalization of GAPDH with PML such that replication of the virus in the virus-infected cell is inhibited.

19. The method of claim 18, wherein the colocalization of GAPDH with PML is inhibited by contacting GAPDH with a depreneyl compound.

20. A method for inhibiting tissue damage due to viral infection, comprising administering to a subject in need thereof an effective amount of a deprenyl compound such that prevention of tissue damage due to viral infection occurs.

21. The method of claim 20, wherein said viral infection is selected from the group consisting of HIV, Herpes Simplex-1 virus, hepatitis A virus, Epstein-Barr virus, SV-40 virus, cytomeglavirus and adenovirus-5.

22. The method of claim 20, wherein the deprenyl compound is represented by the formula :



Formula 1

in which

R_1 is hydrogen, alkyl, alkenyl, alkynyl, aralkyl, alkylcarbonyl, arylcarbonyl, alkoxycarbonyl, or aryloxycarbonyl;

R_2 is hydrogen or alkyl;

R_3 is a single bond, alkylene, or $-(CH_2)_n-X-(CH_2)_m$;

in which X is O, S, or N-methyl; m is 1 or 2; and n is 0,1, or 2;

R_4 is alkyl, alkenyl, alkynyl, heterocyclyl, aryl or aralkyl; and

R_5 is alkylene, alkenylene, alkynylene and alkoxylene; and

R_6 is C_3-C_6 cycloalkyl or

$-C\equiv CH$; or

R_2 and R_4-R_3 are joined to form, together with the methine to which they are attached, a cyclic or polycyclic group;

and pharmaceutically acceptable salts thereof.

23. The method of claim 22, wherein the deprenyl compound is (-)-desmethyldeprenyl.

Add A3

Add B1